

Control versus autonomy - a key issue in debates on national curricula

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Could do better

Locating the Curriculum

The tendency towards introspection

Benefits and ills

The importance of subjects

Clarity in statutory elements

Concepts, principles, fundamental operations and key knowledge

The importance of transnational comparisons

'Coherence' and 'curriculum control'

Benefits

1

The concept of 'entitlement' has been highly effective in raising attainment (Chitty C 2004; Colwill I & Peacey N 2003)

2

Structure progression in the National Curriculum has reduced inappropriate repetition of content as children progress through education (Chitty C op cit; Evangelou et al 2008)

3

The rate and pattern of pupil progression has been enhanced (Chitty C op cit; Tymms P 2004; Whetton et al 2007)

4

Balanced coverage has emerged in the primary phase, particularly in respect of science (Harlen W 2008)

5

The common structure has supported more effective pupil transfer, which previously affected vulnerable groups of children in particular (Dobson J & Pooley CE 2004; Strand S 2002)

6

The curriculum entitlement has enhanced performance of girls in maths and science (Machin S & McNally S 2006)

7

The structured approach to content and assessment has led to identification of issues such as the Key Stage 3 dip (Powell R, Smith R, Jones G, Reakes A 2006; Doddington C, Flutter J & Rudduck J 1999)

8

The National Curriculum has led to higher expectations of young people (Barber M 2002; Hopkins D 2001; Tabberer R 1997)

ills

However, problems have accumulated in respect of:

1

Acute overload, with resulting pressure on teachers to move with undue pace through material and encouraging a ‘tick list’ approach to teaching

(Black P & Wiliam D 1999; Alexander R (ed) 2010; Dearing R 1994; House of Commons Children, Schools and Families Committee 2008)

2

All groups clamouring to ensure that subject content which reflects their interest is included in the ‘core’ content of the National Curriculum – leading to a lack of clarity as to what should legitimately be included, or not included

(Rawling E 2001)

3

Overbearing assessment with adverse impact on teaching and learning

(Black & Wiliam op cit; Pollard A, Broadfoot P, Croll P, Osborn M & Abbott D 1994; ARG & TLRP 2009; Mansell W 2007), with specific problems emerging in relation to narrow drilling for tests (Pollard A, Broadfoot P, Croll P, Osborn M & Abbott D op cit; ARG & TLRP op cit; TES 2005) and a failure of the assessment to provide policymakers with robust information on national standards (Oates T 2005; Statistics Commission 2005; Tymms P 2007; Massey A, Green S, Dexter T & Hamnett L 2003).

Policy potential: understanding the relative performance of different national systems through 'control factors'

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- 4 inspection
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- 7 institutional development
- 8 institutional forms and structures (eg size of schools, education phases)
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Locus of control – England (and Wales and NI)

1944

Education Act locates control in LEAs

1988

Education Reform Act asserts National Curriculum - Grant Maintained schools, FE incorporation, CTCs - GM schools 1998 1196 3% of primary schools, 19% secondary

2002

Academy strategy implemented by Labour, expanded in scope by Coalition 2010 10% of secondary (24 Free Schools at Oct 2011)

Quasi-legal restriction: the Strategies, schemes of work, APP

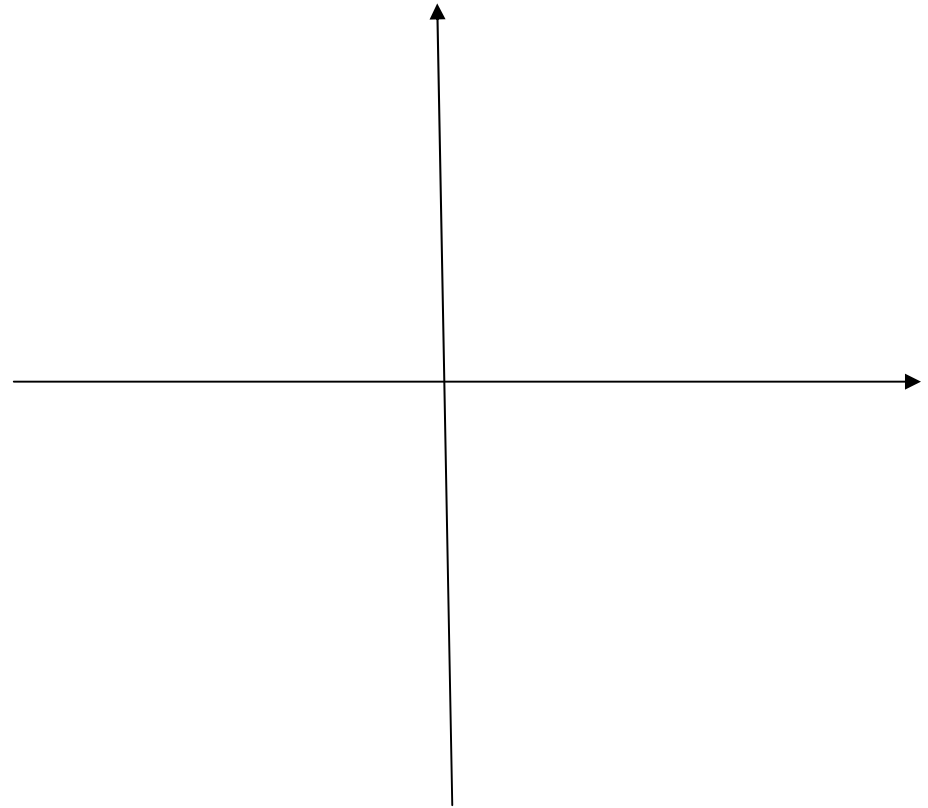
The deep nature of the change effected by the development and implementation of the National Curriculum inevitably caused **a highly introspective process of review and reflection**. Rather than keeping a critical eye on the detail of international developments in curriculum, eyes looked inwards, towards the myriad changes in domestic arrangements necessary to implement the new curriculum effectively and to embed the new assessment and governance arrangements accompanying it. This introspection was perpetuated by rapid recognition of the need to review the National Curriculum in the face of obvious curriculum overload – it was simply too big...

...The introspection associated with the review processes is **entirely consistent with tendencies in the educational reform process in England**. Archer's and Green's trenchant analyses of the character of national reform in different countries highlights the extent to which English processes tend towards **satisfying the conflicting demands of competing societal and lobby groups** rather than developing more radical policy solutions, which have greater potential to confront chronic structural problems

The importance of cross-sectional and horizontal analyses

Cross-sectional analysis (eg PISA, TIMSS, PIRLS)

Historical-contextual analysis



Transnational comparisons

Methodological considerations

Policy Borrowing & cherry picking

Parallel description

'Genuine' transnational comparative analysis

Transnational comparisons

Methodological considerations

Board on International Comparative Studies in Education, United States
National Academy of Sciences

Type I studies typically include large-scale surveys that aim to compare educational outcomes at various levels

Type II studies are designed to inform one or more particular ... education policies by studying specific topics relevant to those policies and their implementation in other countries

Type III studies are not designed to make direct comparisons ... in terms of specific policies or educational outcomes. Rather, they aim to further understanding of educational processes in different cultural and national contexts.

Deployment and employment of different types

Type I includes the large-scale international student achievement studies like TIMSS, PISA and PIRLS. Type II covers the policy-directed studies, outside the context of achievement testing, commissioned by national governments or international agencies (the *Worlds Apart* study of Reynolds and Farrell, commissioned by Ofsted, is an example). Type III includes the majority of academic comparative studies. The EFA global monitoring reports would, I suppose, represent a combination of Types I and II.

BICSE has no doubt where the power and perceived policy relevance lies, for while the majority of comparative education studies are Type III, Type I and II studies receive most of the funding, and the funding difference per study is truly vast. Type I and II studies are a multi-million dollar business. Type III studies scrape together what they can from hard-pressed funding bodies.

Alexander RJ 2010 'World class schools' – noble aspiration or globalised hokum? Compare - A journal of comparative and international education v40 n6 p808

Although they vastly outnumber Type I and Type II studies, Type III studies often do not come to the attention of policy makers or the public. This is a loss, since many are rich in narrative detail and paint a more engaging and provocative portrait of education in other countries than do the summary bar charts and graphs typical of many larger studies.

Ethnographic and case studies, in particular, can explore cultural context in depth and, in turn, help elucidate the way education is organised and understood in different cultures.

National Research Council 2003, 23–4

'Curriculum'

Aims

Content

Methods

Assessment

Evaluation

After Michael Eraut

Curricular and extra-curricular

Taught and untaught curriculum

Unstated curriculum (ethos, culture)

The constructed curriculum

Curriculum and its location

Culture

History

Explanation: legacy and interaction

Policy action: patterns of incentives and drivers

‘...I think I’ve been in the top 5% of my age cohort all my life in understanding the power of incentives, and all my life I’ve underestimated it. And never a year passes (without me) getting some surprise that pushes my limit a little farther...’

Charles Munger The psychology of human misjudgement - speech to Harvard Business School 11 09 2007

Case #1

Spot the curriculum

Singapore

The aims diagram

Textbooks

Tutoring

Innovation

The importance of curriculum aims

'White space'

Case #2

The illusory nature of contemporary autonomy

Finland

Textbooks

National curriculum

Digital control in the 1970s and 1980s

It's dark (literacy, learning culture, home learning)

Case #3

Relaxation and tightening

Japan

National standards

Textbooks

Central prescription of 'loosened elements'

2002 crisis

Policy potential: understanding the relative performance of different national systems through 'control factors'

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Elaboration of factors

- admissions policy
- teacher remuneration
- teacher selection
- teacher conditions of service
- teacher cpd
- professionalization
- internal and between-school dissemination of good practice
- targeting strategy (coasting schools)
- pupil grouping, setting and streaming

Approach to transnational comparisons for the current review

Group 1 – high analytic interest

Singapore, Hong Kong, Finland, Mass USA, Alberta

Group 2 – low analytic interest

Australia, New Zealand

Germany, France, Netherlands, Hungary, Sweden, Flemish Belgium, Asian nations

'Stand out element' #1

Size

| | |
|-------------|--|
| Singapore | 4,839,400 (world bank) |
| Finland | 5,313,399 (worldbank) |
| Hong Kong | 6,977,770 (worldbank) |
| Mass | 6,593,587 (uscensus) |
| Alberta | 2,974,807 (finance and enterprise Alberta) |
| England | 51,460,000 (office for national statistics) |
| South Korea | 48,747,000 (world bank) |

‘Stand out element’ #2

In Primary, fewer things in greater depth

‘...Concentration on a small number of attainable goals, mostly of an academic variety or concerned with the individual’s relationship to society, rather than a spread of effort across many academic, social, affective and moral goals...’

Reynolds and Farrell 1996

| | 5th percentile | 95 th percentile | Difference |
|------------------------------------|----------------|-----------------------------|------------|
| PIRLS 2006 (reading age 10) | | | |
| England | 383 | 673 | 290 |
| Hong Kong | 460 | 655 | 195 |
| Singapore | 420 | 672 | 252 |

These data in literacy show a high spread for England, with low performance at the 5th percentile – a tail of underachievement.

TIMSS 2007 (science age 10)

| | | | |
|----------------|-----|-----|------------|
| England | 403 | 666 | 263 |
| Hong Kong | 437 | 659 | 222 |
| Japan | 428 | 655 | 227 |
| Singapore | 418 | 727 | 309 |

These data in science again show a high spread for England and again display the low performance at the 5th percentile. The results for Singapore do show high spread – but this is explained by very high performance at the 95th percentile.

TIMSS 2007 (science age 14)

| | | | |
|-----------|-----|-----|------------|
| England | 393 | 675 | 282 |
| Hong Kong | 376 | 648 | 272 |
| Japan | 418 | 672 | 254 |
| Korea | 420 | 670 | 250 |
| Singapore | 374 | 720 | 346 |

PISA 2009 (science age 15)

| | | | |
|-----------|-----|-----|------------|
| England | 349 | 673 | 324 |
| Hong Kong | 393 | 681 | 288 |
| Japan | 361 | 686 | 325 |
| Korea | 399 | 665 | 266 |
| Singapore | 362 | 704 | 342 |

In secondary education, the situation changes, with the spread in these systems becoming more closely aligned.

This consistent with the accounts of contrasting model of progression in primary and secondary in Hong Kong and Singapore. In the secondary phase, the achieve higher overall performance attained in primary continues, but the systems begin to manifest higher spread, as selection and 'routing' takes place, after the 'moving all together' model of primary.

So far – interesting Type III analysis – but theory to integrate the analyses?

Stigler and Stevenson – How Asian teachers polish each lesson to perfection
Reynolds and Farrell – Worlds Apart?

A different underlying model of ‘ability’

A different model of progression

Ability models and pedagogy

High quantities of whole-class interactive instruction, in which the teacher attempts to ensure the entire class have grasped the information being given....High proportions of lesson time (50-70%) is used for whole-class teaching. This is not simply of the 'lecture to the class' variety, but high quality interactive teaching in which the teacher starts with a problem and develops solutions and concepts through a series of graded questions addressed to the whole class. Pupils working on their own in groups are correspondingly much rarer than in England.

Reynolds and Farrell 1996 p56

Ability models and pedagogy

Concentration on a small number of attainable goals, mostly of an academic variety or concerned with the individual's relationship to society, rather than a spread of effort across many academic, social, affective and moral goals.

Mechanisms to ensure that **things are taught properly the first time around**, and that there is no 'trailing edge' of children who have to be returned to later (an example from Taiwan is that children have to repeat in the homework books any exercises that they got wrong in their previous homework).

The **use of the same textbooks by all children**, which permits teachers to channel their energy into classroom instruction and the marking of homework, rather than into the production of worksheets that is so much a feature of English teaching.

An alternative model of progression

While much attention has been paid to the Confucian ideal (emphasising effort rather than ability) embedded in Asian systems, a model where **differentiation is a finishing point rather than a starting point**, and is seen as undesirable in the Primary phase, is an important part of arrangements in: Finland, France, Netherlands, Switzerland, Korea, Taiwan, Hong Kong, Japan and Singapore. While it is vigorously enforced in Korea, it manifests itself more subtly in Finland through processes such as all students, of any ability, having dedicated 'catch-up' support, even after very short periods of absence. In some countries it is a shared, explicit strategy with moral connotations, and is enforced by explicit policy. In others, it is a more implicit strategy, embedded in ingrained practices and processes. But **despite these difference in form and expression, detailed transnational comparison shows its extreme importance**

Curriculum control

A system must **exercise control**, it is not that individual agencies should **take control**:

‘...our purpose in introducing alternative ways to govern curriculum...is not to advocate one approach or another. As analysis by Cochran-Smith and Fries (2001) indicates, disagreements about teaching and, by implication, curriculum, often divides along ideological lines, an outcome that occurs no matter how pragmatic the veneer. A functional approach, by specifying in advance the criteria that an effective curriculum-governance system must meet, lessens the tendency to judge these systems in terms of the political values they represent (eg regulation vs deregulation, public interest vs private interest...’

Mick Waters 2010

“...they provide the textbook to help you through it. Before I went for this job, I used to think that all this criticism of exams – that they were being dumbed-down – was unfair ... since I've been there (QCA), I think the system is diseased, almost corrupt...”

Guardian 17 10 2010

Further theory

Schmidt:

Curriculum coherence – form 1

Curriculum coherence – form 2

A system is regarded as 'coherent' when the national curriculum content, textbooks, teaching content, pedagogy, assessment and drivers and incentives all are aligned and reinforce one another (form 1) and when learning outcomes are arranged into a developmentally-appropriate age-related sequence (form 2). For this to be the case, a certain level of control is necessary.

So....what of England?

Where are we now and why?

Science in the National Curriculum

| | ATs | statements of attainment | |
|-----------------------------|----------|--------------------------|----------------|
| 1991 Original specification | 4 | KS3 96 | KS4 139 |
| 1995 Dearing Revision | 5 | KS3 166 | KS4 221 |
| 1999 QCA-led revision | 4 | KS3 121 | KS4 189 |
| 2007 QCA-led revision | 4 | KS3 37 | KS4 30 |

- Dramatic contraction in 2007
- Significant reduction in conceptual demand
- ‘Upward drift’ in, and removal of, demanding material

- Decay of understanding of original purpose of National Curriculum
- Confusion between ‘curriculum’ and ‘National Curriculum’
- Generic (imprecise) statements driven by a commitment to consensus
- Confusion regarding an ‘up-to-date and motivating’ curriculum
- Confusion between context and concepts

Principles

Curriculum coherence is crucial – a National Curriculum is one means of establishing this – note the conundrum regarding textbooks

Focus on concepts, principles and fundamental operations arranged in an age-related framework

Stable, sparse listing

Contextualisation should be controlled by teachers

No slavish commitment to a common structure across subjects, but attending to necessary links

Rapid action allied to appropriate long-term direction

Some overall comparisons

Mathematics – primary

Basic structure similar to other nations

Number curriculum narrower and less demanding

Data handling broader and more demanding

Visualization and transformational geometry unique to England

Science – primary

Different structural division - greater disaggregation in some other nations

Scientific enquiry shared - but this not a structural element in some other nations

Physical processes narrower and less demanding than majority of other nations

Life processes narrower but not less demanding overall

Scientific enquiry and Materials level of demand similar to other nations

The National Curriculum 1995

Science - Key Stage 3

Life processes and living things

Green Plants as organisms

Nutrition and growth

- a. that photosynthesis produces biomass and oxygen;
- b. that plants need carbon dioxide, water and light for photosynthesis;
- c. to summarise photosynthesis in a word equation;
- d. that nitrogen and other elements in addition to carbon, oxygen and hydrogen are required for plant growth;
- e. that root hairs absorb water and minerals from the soil;

Reproduction

- f. how sexual reproduction occurs in flowering plants, including fertilisation and seed formation;

Respiration

- g. That plants carry out aerobic respiration.

The National Curriculum 1995

Science - key stage 3

Materials and properties

Chemical Reactions

- i. that when chemical reactions take place, mass is conserved;
- j. that virtually all materials, including those in living systems, are made through chemical reactions;
- k. to represent chemical reactions by word equations;
- l. that there are different types of reaction, including oxidation and thermal decomposition;
- m. that useful products can be made from chemical reactions, including the production of metals from metal oxides;
- n. about chemical reactions, *e.g. corrosion of iron, spoiling of food*, that are generally not useful;
- o. that energy transfers that accompany chemical reactions, including the burning of fuels, can be controlled and used;
- p. about possible effects of burning fossil fuels on the environment.

National Curriculum 2007

Organisms and Health

In their study of science, the following should be covered:

- a. organisms are interdependent and adapted to their environments;
- b. variation within species can lead to evolutionary changes and similarities and differences between species can be measured and classified;
- c. the ways in which organisms function are related to the genes in their cells;
- d. chemical and electrical signals enable body systems to respond to internal and external changes, in order to maintain the body in an optimal state;
- e. human health is affected by a range of environmental and inherited factors, by the use and misuse of drugs and by medical treatments.

National Curriculum 2007

Chemical and Material Behaviour

In their study of science, the following should be covered:

- a. chemical change takes place by the rearrangement of atoms in substances;
- b. there are patterns in the chemical reactions between substances;
- c. new materials are made from natural resources by chemical reactions;
- d. the properties of a material determine its uses.

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Chasing ghosts - finding the real curriculum

Constructivism - curriculum as aims, methods, content, assessment and evaluation

Getting it wrong: Googling 'Singapore curriculum'; ignoring the history of Finland
The true location of curriculum control - getting it wrong in 2007

From where do personal and social capitals derive in education
(family, culture, tutoring - taught, untaught curriculum, the 'lived experience' of the school as an institution`)

Confusion between contexts and concepts - Stigler and Stevenson; Boaler;

This establishes the distinction between NC and SC - but where are the boundaries?

The 'Brothers Karamazov Problem' - boundaries re autonomy and control - the importance of teacher quality and quality of pedagogy

Chasing the right demarcation between control and autonomy

Transnational analyses do NOT supply a 'judgement-free solution'

Using the control factors

Understanding patterns of incentives

The partial role of the National Curriculum

Embedding the distinction between National Curriculum and School Curriculum

Key elements

Revision of inspection

Review of EYFS

Review of teacher supply

Review of national assessment

Examination of role of textbooks and materials

Review of capacity in Primary phase

Development of a broader range of performance metrics - including EB

Prudent policy involves relaxing some factors and tightening others

Recognising that control is a system characteristic, not a top down mechanism